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177214

December 22, 2005

Charles L. A. Terreni, Esquire
Chief Clerk & Administrator
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, South Carolina 29210

Re: Request for Investigation to Determine Whether a Regulation Should Be
Promulgated Requiring Relocation of Certain Meter Sets or Installation of Splash Guards
on These Meter Sets
Docket No. 2005-270-G

Dear Mr. Terreni:

Please find enclosed the original and twenty-five (25) copies of the Direct Testimony and Exhibits of Vernon Gainey in the above referenced docket. Also, if you would, please date stamp the extra copy and return it to me via our courier. By copy of this letter we are also serving each of the parties of record.

Best regards,

Shannon Bowyer Hudson
Shannon Bowyer Hudson

SBH/pjm
Enclosures

Cc: Jan M. Ayer (w/enc)
James H. Jeffries IV, Esquire (w/enc)
Kerry McTigue, Esquire (w/enc)
Patricia Banks Morrison, Esquire (w/enc)
Paul W. Dillingham, Esquire (w/enc)

OK D. Duke
OK D. Duke

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2005-270-G

IN RE:)	
Request for Investigation to Determine Whether)	CERTIFICATE OF
A Regulation Should Be Promulgated Requiring)	SERVICE
Relocation of Certain Meter Sets or Installation)	
Of Splash Guards on These Meter Sets)	

This is to certify that I, Pamela McMullan, an employee with the Office of Regulatory Staff, have this date served one (1) copy of the **DIRECT TESTIMONY AND EXHIBITS OF VERNON GAINEY** in the above-referenced matter to the person(s) named below by causing said copy to be deposited in the United States Postal Service, first class postage prepaid and affixed thereto, and addressed as shown below:

Jan M. Ayer
1140 Ridgecrest Avenue
North Augusta, SC, 29841

James H. Jeffries IV, Esquire
Moore & Van Allen PLLC
Bank of America Corporate Center
100 North Tryon Street, Suite 4700
Charlotte, NC, 28202-4003

Kerry McTigue, Esquire
Piedmont Natural Gas Company, Inc.
Nelson Mullins Riley & Scarborough, LLP
1320 Main Street, Suite 1700
Columbia, SC, 29201

Patricia Banks Morrison, Esquire
South Carolina Electric and Gas Company
Legal Department - 130
Columbia, SC, 29218

Paul W. Dillingham, Esquire
Spencer & Spencer, P.A.
226 East Main Street, Suite 200
Post Office Box 790
Rock Hill, SC, 29731

A handwritten signature in black ink, appearing to read 'Pamela McMullan', is written over a horizontal line.

Pamela McMullan

December 22, 2005
Columbia, South Carolina

**THE SOUTH CAROLINA
OFFICE OF REGULATORY STAFF
TESTIMONY AND EXHIBITS
OF
VERNON L. GAINEY**



Docket No. 2005-270-G

**Request for Investigation to Determine Whether a
Regulation Should Be Promulgated Requiring
Relocation of Certain Meter Sets or Installation of
Splash Guards on These Meter Sets**

**DIRECT TESTIMONY OF
VERNON L. GAINES
ON BEHALF OF
THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF
DOCKET NO. 2005-270-G**

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Vernon L. Gainey. My business address is 1441 Main Street, Suite 300, Columbia, South Carolina 29201. I am employed by the State of South Carolina as Pipeline Safety Supervisor in the Electric and Gas Department for the Office of Regulatory Staff ("ORS").

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a high school diploma in 1973, successfully completed the Federal Department of Transportation's ("DOT") Pipeline Safety Inspector Certification Program in 1993, and earned the Associate Public Manager Certificate in 2001 as part of the Certified Public Manager ("CPM") Program Curriculum. I earned the CPM Credential in 2003. I have been working in the Pipeline Safety Regulatory and Enforcement area for the past seventeen years, with responsibility of managing the program for the past six years.

Q. WHAT ARE YOUR RESPONSIBILITIES AS SUPERVISOR OF THE PIPELINE SAFETY DEPARTMENT?

A. I am responsible for the Supervision of the Pipeline Safety Inspectors and ensuring that the Pipeline Safety Program is carried out according to our Certification Agreement with the Federal DOT. In general, the Pipeline Safety department enforces

1 the federal pipeline safety regulations set forth by the Federal DOT in addition to the
2 state rules and regulations governing gas systems.

3 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

4 **A.** The purpose of my testimony is to address the issue of whether a regulation
5 should be promulgated requiring relocation of certain meter sets or installation of splash
6 guards on these meter sets.

7 **Q. WHAT ACTIONS HAVE BEEN PERFORMED BY ORS CONCERNING THIS**
8 **MATTER?**

9 **A.** In a letter dated June 21, 2005, Exhibit No. __ (VLG-1), ORS notified all gas
10 system operators ("Operators") of the potential hazard that could develop on certain
11 meter sets. The American Meter Company refers to this particular model and
12 configuration as a "type 12" set. See Page 2 of Exhibit No. __ (VLG-1). All of the
13 jurisdictional Operators in South Carolina as shown on Exhibit No. __ (VLG-2) who
14 have meter sets in service similar to the one referenced in the June 21, 2005 letter have
15 evaluated them and addressed this issue. An Advisory Bulletin, Exhibit No. __ (VLG-3)
16 was issued to all Operators on September 1, 2005. The purpose of the Advisory Bulletin
17 was to make Operators aware of the potential hazard that could develop with these meter
18 sets, but did not require any mandatory action other than asking the Operators to evaluate
19 their systems. An ORS November 3, 2005 follow up letter as shown in Exhibit No. __
20 (VLG-4) requested that Operators with these meter sets provide their action plans, if any.
21 In response, action plans were submitted to ORS from all Operators with these meter sets.
22 Exhibit No. __ (VLG-5) shows a summary of the actions being taken by the Operators.

1 **Q WHY DOES ORS BELIEVE THAT THESE METER SETS HAVE BEEN**
2 **ADEQUATELY ADDRESSED?**

3 **A.** As discussed earlier, all Operators with these meters submitted to ORS action
4 plans in response to our November 3, 2005 letter regarding the September 1, 2005
5 Advisory Bulletin. *See* Exhibit No. __ (VLG-5). The Operators' action plans show that
6 they are addressing the issue by replacing or re-configuring the meter sets or scheduling
7 the meter sets for replacement or re-configuration. Some operators are installing "splash
8 guards" to prevent any potential ice build-up. Also, Operators continue to monitor their
9 systems for any meter sets which they determine to present any potential safety related
10 problems.

11 ORS has not received any information about any regulator freeze-up due to
12 moisture splashing up into the regulator vents of service regulators in South Carolina
13 other than information on the incident that occurred in North Augusta last January 29,
14 2005. In addition, ten other Pipeline Safety Programs in nine southern states were
15 surveyed by ORS to gather additional information. Exhibit No. __ (VLG-6). Only
16 Georgia's Pipeline Safety Program indicated any instances of overpressure associated
17 with the type 12 meter set configuration in combination with freeze-over. None of these
18 states have promulgated a rule or regulation addressing the issue.

19 Based on the above, it is the conclusion of ORS that any rule requiring the
20 Operators to address these meter sets would be redundant in light of the fact that they
21 have all been addressed at this time.

1 **Q. HOW DOES ORS INTEND TO VERIFY THAT OPERATORS ARE**
2 **FOLLOWING THROUGH WITH THEIR PROPOSED ACTION(S)?**

3 **A.** As part of our Pipeline Safety enforcement procedures, we perform annual
4 comprehensive inspections at each of our Operators. We are in the process of revising
5 the inspection report used during the records and procedure review portion of this annual
6 inspection. A section will be added to the questionnaire to ask the Operator whether
7 there are any of the referenced meter sets in service in their system, and if so, how many,
8 and what actions have been planned along with what actions have been taken to address
9 the potential hazard pointed out in the ORS September 1, 2005 Advisory Bulletin. Also,
10 we will ask if any modification(s) or addition(s) have been made to the action plan(s).
11 We will then compare the Operators' responses to the action plans submitted to ORS and
12 summarized in Exhibit No. __ (VLG-5) which are kept on file in our office. If any
13 discrepancies exist we will address them at that time according to our established
14 procedures and guidelines to ensure appropriate action is taken.

15 **Q. HAS ORS INVESTIGATED THIS MATTER THOROUGHLY?**

16 **A.** ORS is confident that this matter has been investigated thoroughly and that the
17 Operators have cooperated sufficiently. The Operators have demonstrated their
18 commitment to public safety through voluntary action and cooperative effort.

19 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

20 **A.** Yes, it does.

**THE SOUTH CAROLINA
OFFICE OF REGULATORY STAFF**

Request for Investigation to Determine Whether a Regulation Should Be Promulgated Requiring
Relocation of Certain Meter Sets or Installation of Splash Guards on These Meter Sets

DOCKET NO. 2005-270-G

VERNON L. GAINES TESTIMONY

EXHIBIT INDEX

EXHIBIT NO.

EXHIBIT TYPE

PREPARED BY

VLG-1	June 21, 2005 Letter to Operators Concerning Type 12 Meter Sets	ORS
VLG-2	Summary of Operator Responses Concerning Type 12 Meter Sets	ORS
VLG-3	Advisory Bulletin #: EGPS080501 Issued September 1, 2005	ORS
VLG-4	November 3, 2005 Follow-up Letter Re: Advisory Bulletin # EGPS080501 Issued September 1, 2005	ORS
VLG-5	Summary of Operator Action Plans	ORS
VLG-6	Summary of Responses From Southern Region States Concerning Meter Sets	ORS

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JOHN W. FLITTER
DIRECTOR
ELECTRIC & GAS REGULATION

VERNON L. GAINEY, CPM
SUPERVISOR
PIPELINE SAFETY

June 21, 2005

To: All Gas System Operators

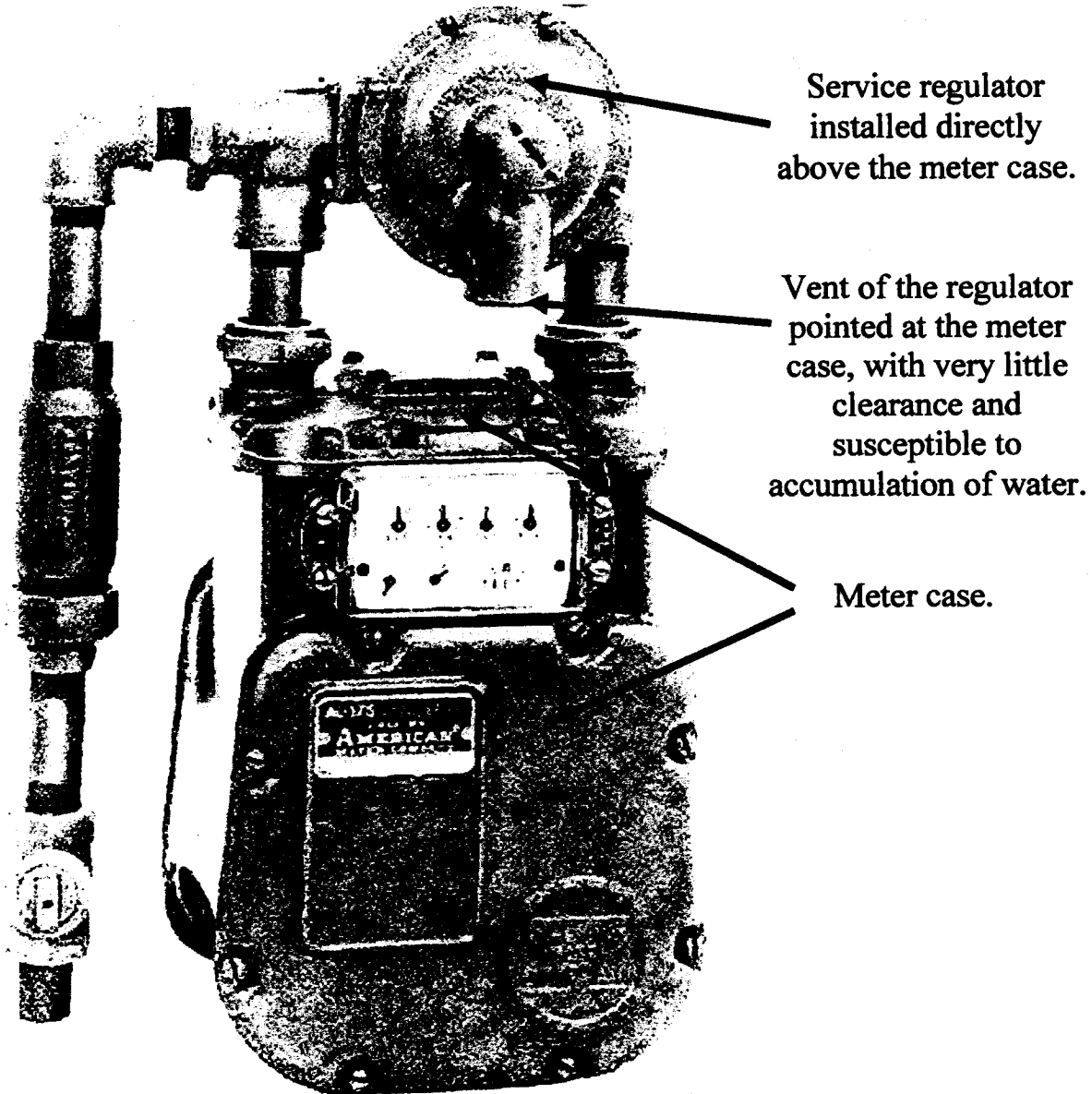
The Pipeline Safety Staff has recently been made aware that it is possible many Operators in South Carolina have residential meter sets configured in such a manner that the service regulator vents face downward just above the meter casing. (Please see attached for example.) The close proximity of the vents with the casing, coupled with them being installed below a roofline where the regulator vent may catch rainwater runoff poses a potential icing problem when temperatures fall below freezing. The freezing of the regulator vent generally results in a loss of gas flow to the customer. However, in some instances the regulator may become fixed in an open position, allowing gas to continue to flow when demand reduces, resulting in overpressure of the customer piping. This cumulates in the possibility of fire, and/or explosion in the customer's home.

We request that you provide a copy of a survey of your system showing how many of this type of meter set configurations are in service. Also, please show how many of these are located in a place where rainwater could spill directly onto the meter set. In addition, please indicate whether you have experienced overpressure problems associated with this type of configuration. We ask that you forward this information to our office within the next sixty (60) days. After reviewing the information provided to us, we will determine if any recommendations addressing safety concerns are warranted.

As always, thank you for your cooperation, and please feel free to contact this office with any questions you may have.

Sincerely,

Vernon L. Gailey, Supervisor
Pipeline Safety
Electric and Gas Regulation



OPERATOR SURVEY CONCERNING TYPE 12 METER SETS

NAME OF OPERATOR	TOTAL # OF METERS	LETTER SENT	REPLY RECEIVED	NUMBER OF TYPE 12 SETS	# AFFECTED BY WATER	# OF OVER PRESSURE EVENTS
Aiken HA	118	6/21/2005	8/17/2005	none	n/a	n/a
Ameresco, Inc.	none	6/21/2005	8/19/2005	none	n/a	n/a
BASF Corp.	none	6/21/2005	8/18/2005	none	n/a	n/a
Blue Flame Gas Co.	48	6/21/2005	7/21/2005	none	n/a	n/a
Charleston HA	28	6/21/2005	8/18/2005	none	n/a	n/a
Cherokee Co. Co-Gen	none	6/21/2005	8/18/2005	none	n/a	n/a
Chester Co. NGA	9,635	6/21/2005	8/19/2005	5,000	300	none
City of Bamberg	1,610	6/21/2005	8/17/2005	none	n/a	n/a
City of Bennettsville	3,306	6/21/2005	8/25/2005	none	n/a	n/a
City of Blacksburg	737	6/21/2005	8/12/2005	none	n/a	n/a
City of Fountain Inn	9,635	6/21/2005	8/8/2005	3677	10	none
City of Laurens	7,344	6/21/2005	8/19/2005	none	n/a	n/a
City of Orangeburg	10,548	6/21/2005	8/18/2005	291	113	none
City of Union	7,141	6/21/2005	8/11/2005	none	n/a	n/a
Clinton Newberry NGA	15,323	6/21/2005	8/25/2005	13,430	2,094	none
Columbia HA	727	6/21/2005	7/20/2005	none	n/a	n/a
Dept. of Defense	none	6/21/2005	8/19/2005	none	n/a	n/a
Easley HA	none	6/21/2005	8/19/2005	none	n/a	n/a
Ferrell Gas Co.	none	6/21/2005	8/22/2005	none	n/a	n/a
Fort Hill NGA	43,847	6/21/2005	7/19/2005	30	none	none
Greenwood CPW	21,687	6/21/2005	8/25/2005	2	none	none
Greer CPW	17,284	6/21/2005	8/24/2005	2	none	none
Kimberly Clark Corp.	none	6/21/2005	8/18/2005	none	n/a	n/a
Lancaster Co. NGA	17,246	6/21/2005	8/23/2005	16,380	7,588	none
Laurens HA	122	6/21/2005	8/25/2005	none	n/a	n/a
Piedmont NG Co.	138,341	6/21/2005	8/15/2005	18,120	7,939	none
Santee Cooper	none	6/21/2005	7/12/2005	none	n/a	n/a
SCE&G	311,779	6/21/2005	8/16/2005	12,800	3,072	1
SCPC	none	6/21/2005	7/12/2005	none	n/a	n/a
SCRHA #1	1,342	6/21/2005	8/25/2005	none	n/a	n/a
SONAT	none	6/21/2005	7/12/2005	none	n/a	n/a
Town of Wainsboro	2,846	6/21/2005	8/25/2005	1,126	50	none
York Co. NGA	45,866	6/21/2005	8/24/2005	none	n/a	n/a
TOTALS	666,560	—	—	70,858	21,166	1



**OFFICE OF REGULATORY STAFF OF
SOUTH CAROLINA**

ADVISORY BULLETIN #: EGPS080501

Issue Date: September 1, 2005

49 CFR Reference(s): N/A

Subject: Potential safety hazards associated with certain residential meter set configurations.

Office of Regulatory Staff of South Carolina

Electric and Gas Regulation, Pipeline Safety

P. O. Box 11263

Columbia SC 29211

PIPELINE SAFETY ADVISORY BULLETIN

Advisory Bulletin #: EGPS080501

Date Issued: September 1, 2005

To: All Jurisdictional Gas and Hazardous Liquid System Operators in South Carolina.

Purpose:

The purpose of this Advisory Bulletin is to make Operators aware of potential safety hazards which are associated with certain residential meter set configurations. Specifically, meter set configurations in which the service regulator is situated directly above and in close proximity to the meter casing are the subject of this Advisory Bulletin. When these meter sets are located in a position where water spillage or rainwater runoff may come in contact with the meter, there could be a possibility of over-pressure downstream of the meter if the service regulator ices over during sub-

freezing temperatures. In the event of regulator vent freeze-up, it is possible that undue pressure could be placed on the home's piping system.

Background:

Following a recently completed investigation of a consumer complaint, the Office of Regulatory Staff became aware of this potential hazard which may exist on systems in South Carolina. In the investigated incident which took place in January, 2005, the meter set was located in a position where rainwater runoff fell on the meter and splash from the rainwater caused the service regulator vent to freeze up when temperatures fell below 32° F, thus rendering the regulator vent inoperable. This freeze-up of the regulator vent resulted in over-pressure on the customer piping and subsequent fire inside the house.

In June, 2005, the ORS conducted a survey of all gas operators in the state to determine 1) how many of these meter sets are in service, 2) how many of these are affected by water spillage or rainwater runoff onto the meter set, and 3) how many over-pressure problems related to freezing temperatures have occurred on these type meter sets. Survey reports indicate that approximately 108,000 of these meter sets are in service, with approximately 24,000 being affected by water spillage or rainwater runoff. Other than the aforementioned January 2005 incident, the survey of gas operators indicates no other reports of over-pressure problems occurring downstream of these subject meter sets that are related to freezing temperatures.

Advisory:

It is recommended that each Operator identify the location any of these herein described meter set configurations in use on their systems and be prepared to take appropriate action as may be deemed necessary. Actions could include but not be limited to reconfiguring these sets, relocating them, or installing "splash guards" in the regulator vents.

Issued in Columbia, SC, Tuesday, September 1, 2005.

Vernon L. Gainey, Pipeline Safety Supervisor

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VERNON L. GAINNEY, CPM
SUPERVISOR
PIPELINE SAFETY

November 3, 2005

To: All Gas System Operators

Re: Advisory Notice # **EGPS080501**

This letter serves as a follow up to the above-referenced Advisory Notice dated September 1, 2005 and mailed to all Gas System Operators. In that Advisory Notice our agency reported survey results showing approximately 24,000 meter sets in service being affected by water spillage or rainwater runoff. If your service area uses these types of meter sets and you have determined to take action due to the potential hazard outlined in our Notice, please provide to us what action(s) you plan to take or have taken regarding these meter sets along with a corresponding timeline for completion of your action(s). We kindly request your written response to our office on or before November 21, 2005. As you are likely aware, the Public Service Commission of South Carolina (the "Commission") set this matter [Docket No. 2005-270-G] for hearing on January 19, 2006 at 10:30 a.m. so that it may receive additional information about this matter. We would like to present to the Commission what voluntary actions you have taken.

As always, thank you for your cooperation, and please feel free to contact this office with any questions you may have.

Sincerely,

Vernon L. Gainney, Supervisor
Pipeline Safety
Electric and Gas Regulation

OPERATOR RESPONSES TO FOLLOW UP LETTER

NAME OF OPERATOR	LETTER SENT	REPLY RECEIVED	NUMBER OF TYPE 12 SETS AFFECTED BY WATER	ACTION BEING TAKEN ON THESE METER SETS	TIME FRAME
Chester County NGA ¹	11/3/2005	11/22/2005	900	Survey system, replace sets where potential problems exist, and implement a customer awareness program.	3 years
Clinton Newberry NGA ¹	11/3/2005	11/22/2005	2094	Re-configure / replace	5 years
City of Fountain Inn	11/3/2005	12/12/2005	12	Re-configure / replace	Less than 1 year
Lancaster County NGA ¹	11/3/2005	12/12/2005	1000	Revise existing installation policy, survey entire system, and replace meter sets that have the potential for problems.	4 years
City of Orangeburg	11/3/2005	12/9/2005	113	Re-configure / replace	1 year
Piedmont Natural Gas Co	11/3/2005	11/17/2005	7939	Install splash guards	2 years
South Carolina Electric and Gas Company	11/3/2005	11/21/2005	3072	Re-configure, replace, or install splash guards	Less than 1 year
Town of Winnsboro	11/3/2005	12/16/2005	70	Re-configure / replace	1 year

¹ Indicates Natural Gas Authority.

SUMMARY OF RESPONSES FROM SOUTHERN REGION STATES

CONCERNING METER SETS

NAME OF SOUTHERN REGION STATE	ANY LAW CONCERNING TYPE 12 METER SETS	ANY OVER PRESSURE PROBLEMS ON THESE SETS	OTHER COMMENTS
ALABAMA	No	None	None
ARKANSAS	No	None	None
FLORIDA LP	No	None	None
FLORIDA PSC	No	None	None
GEORGIA	No	Yes	There have been as may as one dozen (12) over pressure incidents in Georgia.
KENTUCKY	No	None	None
MISSISSIPPI	No	None	None
NORTH CAROLINA	No	None	None
PUERTO RICO	No	None	None
SOUTH CAROLINA	No	Yes	There has been 1 (one) over pressure incident in South Carolina.
TENNESSEE	No	None	None